

1 METHOD AND APPARATUS FOR FABRICATING
5 COMPLEX GRATING STRUCTURES

ABSTRACT OF THE DISCLOSURE

5 An imprint lithography method provides a negative image of a pattern formed in
10 a fixed medium on a mechanically flexible imprint master. A substrate includes a
15 deformable material formed over the substrate surface to be patterned. The fixed
20 medium of the imprint master contacts with the substrate to cause the deformable
25 material to deform and contour to the negative image of the pattern of the fixed
30 medium. The imprint master is decoupled from the substrate after the pattern formed
35 in the deformable material is solidified. With the solidified pattern formed on the
 substrate, the substrate is then patterned by etching or other means.

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